

## A Brief Maple 12 Cheat Sheet

- There are two different interfaces for Maple. I think it's clearest to use the Document Mode. Probably the easiest way to do this is to go to **File – New – Document Mode**.
- The palettes on the left can be very handy for providing templates for Maple's syntax. In particular, the **Expression** and **Common Symbols** palettes will be especially useful for Calculus.
- You may eventually find that it is easier to enter some expressions on the keyboard rather than use the palettes. A few handy ones are:

**Pi** for  $\pi$   
**exp(x)** for  $e^x$   
**sqrt(x)** for  $\sqrt{x}$

Be aware that Maple is case-sensitive: **pi** is *not* the same thing as **Pi**.

- The contextual menus provide access to many of the functions of Maple. If you right-click on an expression, Maple will give you the options to:

Differentiate, Integrate, 2-D Plot, Evaluate at a point, Approximate, and many others

Explore!

- You can access the Maple commands for numeric integration by:
  - **Tools – Load Package – Student Calculus 1** will load the package
  - **RiemannSum( )** is the Maple function that will calculate, or plot, the approximation. For example,
 

```
RiemannSum( cos(x^2), x=0..2 Pi, partition=30, method=left, output=sum)
```

 will output  $L_{30}$  for  $\int_0^{2\pi} \cos(x^2) dx$ . You can then right-click on the output and select **Approximate** to find the numeric value.
  - The other options we will use for **method** are **right** and **midpoint**  
 The other options we will use for **output** are **plot** and **animation**
- The **Help** menu is your friend. Use it to find the exact syntax and options for the commands. The **Help – Quick Reference** option is also worth exploring.
- If you've never used Maple before, don't get overwhelmed or discouraged. It's a remarkable tool that will help you explore and learn mathematics more deeply.